

Before the
Federal Communications Commission
Washington, DC

In the Matter of:)	
Protecting and Promoting the)	GN Docket No. 14-28
Open Internet)	WCB Docket No. 17-108
("Restoring Internet Freedom"))	

Comments of
Telecommunications for the Deaf and Hard of Hearing, Inc. (TDI)
National Association of the Deaf (NAD)
Hearing Loss Association of America (HLAA)
Association of Late-Deafened Adults (ALDA)
Cerebral Palsy and Deaf Organization (CPADO)
Deaf and Hard of Hearing Consumer Advocacy Network (DHHCAN)
Deaf/Hard of Hearing Technology Rehabilitation Engineering Research Center
(DHH-RERC)
Universal Interfaces and Information Technology Access Rehabilitation Engineering
Research Center (UIITA-RERC)
Prof. Clayton Lewis

August 30, 2017

Blake E. Reid
Counsel to TDI
blake.reid@colorado.edu
303.492.0548

Discussion

Telecommunications for the Deaf and Hard of Hearing, Inc. (TDI), the National Association of the Deaf (NAD), the Hearing Loss Association of America (HLAA), the Association of Late-Deafened Adults (ALDA), the Cerebral Palsy and Deaf Organization (CPADO), and the Deaf and Hard of Hearing Consumer Advocacy Network (DHHCAN), collectively, “Consumer Groups,” the Deaf/Hard of Hearing Technology Rehabilitation Engineering Research Center (DHH-RERC), the Universal Interfaces and Information Technology Access Rehabilitation Engineering Research Center (UITA-RERC), and Prof. Clayton Lewis respectfully reply to initial comments on the Commission’s May 23, 2017 *Notice of Proposed Rulemaking* in WCB Docket No. 17-108 (“*Repeal NPRM*”).¹

The record stands largely in support of our initial comments, which emphasized the importance of maintaining the Commission’s Open Internet rules to protect the ability of consumers with disabilities to make educated decisions about broadband access and use high-bandwidth, accessibility-oriented applications of their choosing.² Indeed, no commenter appears to have substantively disputed these arguments.

However, we take this opportunity to briefly address Comcast’s contention that “a more flexible approach to prioritization” is required to ensure accessible communication.³ Specifically, Comcast contends that “[f]or example, a telepresence service tailored for the hearing impaired requires high-definition video that is of sufficiently reliable quality to permit users ‘to perceive subtle hand and finger motions’ in real time.”⁴

¹ Restoring Internet Freedom, 32 FCC Rcd. 4434, https://apps.fcc.gov/edocs_public/attachmatch/FCC-17-60A1_Rcd.pdf.

² See generally Comments of TDI, et al. (July 17, 2017) (“Consumer Groups and Researchers’ Comments”), <https://www.fcc.gov/ecfs/filing/1071783345674>.

³ Comments of Comcast at 56 (July 17, 2017), <https://www.fcc.gov/ecfs/filing/107171777114654>.

⁴ *Id.*

We do not support and have not seen evidence demonstrating the proposition that paid prioritization is important or necessary for accessibility-oriented applications, particularly on modern broadband networks. As our initial comments explained in detail, prioritization for the purposes of accessibility is not only unnecessary, but a bad policy choice that portends discrimination against people with disabilities, including potential privacy violations, reductions in a competitive market for accessible applications, and increased service costs.⁵

Moreover, Comcast's comment adds to the record of BIAS providers invoking unsupported accessibility concerns in service of rolling back net neutrality protections.⁶ Consistent with that record, Comcast's contention arrives without technical analysis to support those contentions or meaningful consultation with the community of people with disabilities who would be affected by a change in the Commission's network policies.⁷

Instead, Comcast rests its support for the contention solely on a recent blog post by an economic researcher containing a conclusory two-paragraph aside on video calling applications for sign-language users.⁸ The post's author declares, with almost no analysis, that "high-def real-time video quality requires upstream and downstream capacity reservation and end-to-end reliability."⁹ The author further opines without explanation that such quality "is not cheap to provide," that a BIAS provider delivering such an application would have to "charge the [service] provider, charge deaf customers a premium, or spread the costs across all customers," and that the Open Internet rules' paid prioritization ban would require the provider to "charge [its] customers for increased costs."¹⁰

⁵ See Consumer Groups and Researchers Comments at 10-14

⁶ See *id.* at 11-12.

⁷ See *id.*

⁸ Comcast Comments at 56 (citing Brent Skorup, *The FCC's Misguided Paid Priority Ban*, The Technology Liberation Front (April 13, 2017), <https://techliberation.com/2017/04/13/the-fccs-misguided-paid-priority-ban/>).

⁹ See Skorup.

¹⁰ See *id.*

The only citation in the post, however, is to an analysis of a case study of the prioritized provision of video calling by the Welsh government over 2006-era DSL connections.¹¹ Unlike modern connections in the many megabits or even gigabits like those offered by Comcast, those connections maxed out at 512 kbps downstream and 256 kbps upstream.¹² As a result, those connections could barely accommodate video calling at a minimal level of quality *even with no other traffic on the network*.¹³

Neither Comcast nor the author of the cited post acknowledges the enormous differences between providing video calling on a decade-old narrowband network barely capable of handling video and today's modern broadband networks, most of which have far more than sufficient capacity to handle video calling applications at a minimum level of quality, even at routine levels of congestion, without special prioritization arrangements or additional costs to consumers with disabilities.

As a practical matter, we and our members rarely observe network congestion or other performance issues that affect the performance of accessible applications in the wild aside from those caused by misconfigured or underperforming routers and firewalls not under the control of BIAS providers. The top technical factor in those problems is wireless interference, particularly in the unlicensed bands used by WiFi routers—a serious problem but one that paid prioritization arrangements upstream from routers would do nothing to mitigate.

¹¹ See *id.* (citing Martin Geddes, *How Wales got the first Internet 'fast lane'* (July 8, 2015), <http://www.martingeddes.com/how-wales-got-the-first-internet-fast-lane/>).

¹² See *Geddes*.

¹³ See Consumer Groups and Researchers Comments at 5 (noting the generally accepted bandwidth requirements for modern video calling—a minimum of 256 kbps in each direction, and preferably 512 kbps for wireless connections or 2.5 Mbps for wired connections). The system apparently failed not because of quality or priority issues, but because the user equipment was too expensive for its intended users to afford and because the Welsh government could not provide accessible installation services. See *Geddes*.

Rather, as our comments explain, the primary upstream barrier that consumers with disabilities face is not congestion, but the widespread proliferation of data caps that limit consumers' ability to use high-bandwidth applications such as video calling on equal terms.¹⁴

We again emphasize that we support Commission action to articulate the contours of the reasonable network management exception to the rules to address non-commercial prioritization concerns such as quality-of-service guarantees, which may affect accessibility-oriented applications.¹⁵ But we reiterate our long-standing belief that the Commission can do so within the contours of the existing Open Internet rules instead of allowing for prioritization practices that raise the prospect of significant competitive, cost, and privacy harms that will come at the expense of consumers with disabilities.

Respectfully submitted,

/s/

Blake E. Reid
Counsel to TDI

blake.reid@colorado.edu
303.492.0548

¹⁴ See Consumer Groups and Researchers Comments at 4-8.

¹⁵ See, e.g., *id.* at 15.

Telecommunications for the Deaf and Hard of Hearing, Inc. (TDI)

Claude Stout, Executive Director • cstout@TDIforAccess.org
8630 Fenton Street, Suite 121, Silver Spring, MD 20910
www.TDIforAccess.org

National Association of the Deaf (NAD)

Howard Rosenblum, Chief Executive Officer • howard.rosenblum@nad.org
Contact: Zainab Alkebsi, Policy Counsel • zainab.alkebsi@nad.org
8630 Fenton Street, Suite 820, Silver Spring, MD 20910
301.587.1788
www.nad.org

Hearing Loss Association of America (HLAA)

Barbara Kelley, Executive Director • bkelly@hearingloss.org
Contact: Lise Hamlin, Director of Public Policy, LHamlin@Hearingloss.org
7910 Woodmont Avenue, Suite 1200, Bethesda, MD 20814
301.657.2248
www.hearingloss.org

Association of Late-Deafened Adults (ALDA)

Sharaine Roberts, President • ALDAPresident@alda.org
8038 MacIntosh Lane, Suite 2, Rockford, IL 61107
815.332.1515
www.alda.org

Cerebral Palsy and Deaf Organization (CPADO)

Mark Hill, President • president@cpado.org
1219 NE 6th Street, Apt. #219, Gresham, OR 97030
503.468.1219
www.cpado.org

Deaf and Hard of Hearing Consumer Advocacy Network (DHHCAN)

Bernie Palmer, Vice Chair • edgar.palmer@gallaudet.edu
8630 Fenton Street, Suite 121, Silver Spring, MD 20910-3803

Rehabilitation Engineering Research Center on Technology for the Deaf and Hard of Hearing, Gallaudet University (DHH-RERC)

Contact: Christian Vogler, PhD • christian.vogler@gallaudet.edu
800 Florida Avenue NE, TAP – SLCC 1116, Washington, DC 20002

Universal Interfaces and Information Technology Access Rehabilitation Engineering Research Center (UIITA-RERC)

Gregg C. Vanderheiden, Ph.D., Director • greggvander@umd.edu
University of Maryland, College Park

Prof. Clayton Lewis

clayton@colorado.edu

430 UCB, University of Colorado, Boulder CO 80309 USA

CC:

Matthew Berry, Nicholas Degani, Nathan Leamer, Zenji Nakazawa, Office of Chairman Pai

David Grossman and Claude Aiken, Office of Commissioner Clyburn

Robin Colwell, Office of Commissioner O'Rielly

Karen Peltz Strauss, Consumer and Governmental Affairs Bureau

Suzy Rosen Singleton, Disability Rights Office

Rosaline Crawford, Disability Rights Office

Kathryn A. Zachem, Comcast